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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,203	04/09/2001	Toby Trevor Fury Mottram	604-589	3671

7590

10/23/2002

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EXAMINER

CYGAN, MICHAEL T

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/828,203

Applicant(s)

MOTTRAM ET AL.

Examiner

Michael Cygan

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 12-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group 1 (claims 1-11) in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 12-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 50. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "23,57,58" have been used to designate both equipment in Figures 1-7 and displayed curves in Figures 8 and 9. A proposed drawing correction or corrected drawings are required in reply to

the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities: At lines 3-5 of page 2, the references to US-A-4,202,352 and EP-A-6,650,051 which are cited as "(e)xamples of 'electronic noses'" do not appear to disclose electronic noses. Appropriate correction is required.
6. The specification is objected to since it lacks section headings to clearly delineate the parts of the specification. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use. As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading:

BACKGROUND OF THE INVENTION.
BRIEF SUMMARY OF THE INVENTION.
BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
DETAILED DESCRIPTION OF THE INVENTION.

Correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 3 of the claim, a "third humidity sensor" is recited; however, since no "second" humidity sensor was recited, the claim is indefinite as to the number of humidity sensors encompassed by the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Mottram (WO 97/00444). With respect to the method claims, Mottram discloses the claimed invention, a method for monitoring concentration of oxygen passed through a membrane comprising the steps of: measuring the sample gas humidity (by microprocessor [508]) while the sample gas is in a mixing chamber [507], providing a sensor chamber [514] containing a sensor array [517], adjusting the humidity of a calibration and purging medium flowing through the sensor chamber to be within a humidity range substantially the same as that of the sample gas, admitting sample gas into the sensor chamber, and monitoring the sensor output. The mixing

chamber provides a source of gas at a selected humidity level. The microprocessor [508] controls the humidity of the contents of the mixing chamber (through a first humidity sensor) and the sensing chamber (through a second humidity sensor). Mottram discloses the use of olfactory sensors such as an electronic nose as the sensor array; see page 18, lines 13-22. See Figure 5; page 22, line 30 through page 23, line 18; and page 11, line 21 through page 12, line 5.

With respect to apparatus claims, Mottram discloses the claimed invention, an apparatus comprising a measuring device (humidity sensor [502] or microprocessor [108]) for measuring the humidity of the sample gas, a device (Figure 5, including particularly numerals 506-515) for passing humidified air through a sensor chamber [514] containing sensor array [517] such that the sensor chamber is within a humidity range substantially the same as that of the sample gas, and a valve [505] for admitting sample gas towards the sensor chamber. Sample gas is enclosed by a chamber [501,506,507]. The mixing chamber provides a source of gas at a selected humidity level. The microprocessor [508] controls the humidity of the contents of the mixing chamber (through a first humidity sensor) and the sensing chamber (through a second humidity sensor). Mottram discloses the use of olfactory sensors such as an electronic nose as the sensor array; see page 18, lines 13-22. See Figure 5; page 22, line 30 through page 23, line 18; and page 11, line 21 through page 12, line 5.

9. Claims 1-6 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Mayer (US 4,852,389). With respect to apparatus claims, Mayer discloses the claimed invention, an apparatus comprising a measuring device [46] which measures the humidity of a sample gas, a device (Figure 4) which passes humidified air (from a carrier gas source) through a sensor chamber [44,47] containing an O₂ sensor. The device utilizes readings from humidity sensors [46,56] to adjust the relative humidities of the test and carrier gases to be substantially the same (column 13, lines 13-26). The device has a valve [28a, 28b] for admitting the sample gas into an upper sample chamber [42], where the sample gas then passes through a membrane into sensor chamber [44,47] containing the O₂ sensor. See entire document, especially Figures 4 and 5, and column 9, lines 5-38.

With respect to method claims, Mayer discloses the claimed invention, a method for monitoring concentration of oxygen passed through a membrane comprising the steps of: measuring the sample gas humidity with a sensor [46] in a sample chamber [42]; providing a sensor chamber [44,47] containing an oxygen sensor; adjusting the relative humidities of the test and carrier gases to be substantially the same (column 13, lines 13-26); admitting the sample gas into an upper sample chamber [42], where the sample gas then passes through a membrane into sensor chamber [44,47] containing the

O₂ sensor; and monitoring the output of the sensor (column 9, lines 5-38). A source of humidified gas is provided and passed to the sensor chamber (Figure 4). The humidities of sample and carrier gases are equalized through respective humidity sensors [46,56] and flow valves; see Figure 4 and column 9, lines 26-38. The humidity levels are predetermined (column 9, lines 30-35). With respect to claim 6 as best understood, a humidity sensor [56] is provided in the sample chamber [44,47]. See entire document, especially Figures 4 and 5, and column 9, lines 5-38.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kato (JP 05045260A and JP 06088772A) discloses equalizing measurement and standardization gas humidities in odor sensors. Dauvergne (US 5,377,528) discloses humidity control of a chamber having pollution and humidity sensors. Kessel (US 5,958,200) discloses equalizing measurement and ambient gas humidities in gas sensors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is 703-305-0846. The examiner can normally be reached on 8:30-6 M-Th, alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 703-305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

A handwritten signature in black ink, appearing to read 'Michael Cygan', with a stylized flourish at the end.

Michael Cygan
October 9, 2002